



## Students banned from Ricketts House *Charges of harassment, pornography*

By Sarah Marzen

NEWS EDITOR

On Thursday April 16, Dean Hall asked two Ricketts students, David Koenitzer and Aryan Safaie, to move out of Ricketts House by the end of next weekend. Both are also being asked to go through sexual harassment training.

This ruling effectively deems the two students to be persona non grata (PNG) in Ricketts House. PNGs are given either as punishments to students that violate Institute policies or by a House vote to an individual that makes House members feel uncomfortable. This restriction can be revisited in next fall term, according to Dean Hall.

The ruling is based on emails sent to Ricketts House's email list; the emails resulted in at least one anonymous complaint to the Deans.

According to Dean Hall's ruling, both Koenitzer and Safaie's emails violated Caltech's Unlawful Harassment Policy by making "demeaning comments about women" and violated the Caltech Policy on the Appropriate

Use of Electronic Resources by displaying "sexually suggestive material". Dean Hall's ruling was based on recommendations made by two other administrators, and the rulings were made after all three administrators spoke to both students individually.

"Generally speaking... when the Deans, CRC or whatever is considering the severity of actions to be taken in response to some incident, the things considered include context, the violation itself, and the attitude of the student during the investigation," said Dean Hall in an email.

According to Koenitzer, Dean Hall objected to the context of the email as well as to the content. Koenitzer and Safaie's March 14 emails responded to an email from the Ricketts House Resident Associate that requested Ricketts House members to refrain from poor treatment of women. Both Koenitzer and Safaie said they were unsure of what prompted the RA's email.

"The email was completely vague and seemingly unprompted," said Koenitzer. "Due to the ambiguous nature of the email, the severity of

the situation was not properly conveyed and many of us felt comfortable sending satirical and joking material in an effort to clarify the email's intent."

Koenitzer's email had links to two images, one of a woman using an iron instead of a computer mouse and one three women wearing scarves that resembled breasts. A string of emails followed Koenitzer's response, including an email from Safaie with a link to a video with potentially sexual material.

"We were ridiculing this very general accusation [from the RA]," said Safaie.

According to Dean Hall, one student's past infractions factored into the Deans' ruling.

Safaie said that he respects the Deans' decision on his case. "I'm not trying to point fingers at the Deans. I really believe they're fair," said Safaie. "Sexual harassment is a serious thing, and the Deans have got to be as nitpicky as possible" for legal reasons. However, Safaie doesn't believe that the Deans ruled correctly on Koenitzer's case.

Koenitzer plans to appeal the Deans' decision. "The emails



Photo by Tina Ding

Above: the tent in the Ricketts-Fleming courtyard that housed David Koenitzer and Aryan Safaie on Friday night, soon after their ban from entering Ricketts House was announced.

were intended as a joke," said Koenitzer. "If I had known that they would have been blown out of proportion and interpreted as an attack, I would not have sent them."

"The punishment doesn't fit the crime," said Koenitzer.

Undergraduates have responded strongly to the PNGs, and most of the vocal responses have not been in support of the Deans' decision. Two nights after the PNG's were announced, a group of undergraduates held a candlelight vigil in the coffeehouse with flowers, candles, a picture of

one of the PNG'd students, and plaintive music- a banjo, a guitar, a harmonica- and later moved to the tent in which the two undergraduates and one of their roommates were camping.

Other emails sent to House lists regarding the incident have questioned Caltech's sexual harassment policy, saying that the Koenitzer and Safaie's emails were within community standards, including one response from Ricketts House member Emma Cohen.

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## Take a ride in an eco-friendly BMW

By Zenan Chang

STAFF WRITER

Superficially, the words "Clean Energy" that are emblazoned in large sky-blue letters on the sides of one of the cars in the construction zone parking lot look like a simple advertisement. The newest car in Caltech's Chauffeur Service fleet could easily be mistaken as just another rich guy's silver-blue BMW 7 Series sedan. But if one were to open the trunk and look under the paneling, one would find a cylindrical tank holding 17.5 pounds of liquid hydrogen at 23 degrees Kelvin.

The BMW Hydrogen 7, a hydrogen-powered luxury vehicle,

has found its way to Caltech.

One of twenty such cars in the United States, the BMW Hydrogen 7 was loaned to Caltech by BMW for six months. Other BMW Hydrogen 7's reside at "educational venues" such as the Peterson Automotive Museum in Los Angeles (in their alternative power exhibit), while several others have cycled their way through public figures in politics and business, and eco-friendly celebrities such as Brad Pitt, Angelina Jolie, and Leonardo DiCaprio.

The eco-friendly luxury vehicle, modeled after their high-end 7-series luxury sedan, runs on hydrogen combustion and boasts to be the first hydrogen-powered luxury vehicle ready for mass

production, having gone through scores of performance and safety tests. In loaning out their hydrogen powered vehicles, BMW hopes to spread the word on clean energy alternatives.

Initially, BMW loaned the Hydrogen 7 to Dr. Michael R. Hoffmann, the James Irvine Professor of Environmental Science, whose research interests include photoelectrochemical splitting of water to produce hydrogen. Hoffman was selected as a "reputable representative" of clean energy.

But Dr. Hoffmann had another suggestion. "I thought that a better way to spread the word about

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## Grades for non-core freshman classes proposed

By Chris Kennelly and Joel Nikolaus

EDITOR-IN-CHIEF

The Core Curriculum Steering Committee (CCSC) is considering changing the long standing freshman grading policy. Under the new policy, students would no longer be able to take some classes Pass-Fail during freshman year.

Core classes, core-replacement classes, humanities and social sciences taken during the first two terms would still be on Pass-Fail, but Professor Brad Filippone, the chair of the CCSC, said that other classes would have to be taken on grades. So while freshman placing out of Ch1ab could still take the first two terms of Ch41 pass-fail, freshman who choose to enroll in courses such as EE51 would have to take the class on grades.

One of the reasons for this particular change are concerns by CCSC members that the current policy encourages students to take certain classes out of the expected sequence and overwhelm themselves. In addition, there is concern that taking such classes draws the focus away from Core. Records from the Registrar support the notion that a significant number of freshmen traditionally take courses such as EE51 and CS21 while on pass-fail.

Over this last week, Swati Bhanderi, the student representative on the committee, held meetings at the various Houses to discuss the proposal. This feedback supplemented the results from an earlier ARC survey, in which people didn't make comments, according to Bhanderi.

The House discussions revealed "a lot of holes" in the proposal. Notably, students thought that changes might "affect a lot of things that the committee, looking at the academic side of things, did not see." Specifically, the policy might only exacerbate the problem, that "students would spend more time with classes on grades" and that as a result it only further "devalues core." Other concerns include a loss of a proper context to teach the honor code, a loss of pass-fail as a safety net, and a loss of the opportunity to just explore.

Still, while there were some outspoken criticism of the proposal, Bhanderi said that "plenty of people took a positive view as well." In addition there were those that felt it was unfair that students could take classes in their option on pass-fail, and that introducing grades earlier was a good way to for students to learn study habits.

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Photo by Tina Ding

The BMW Hydrogen 7 sits on the Beckman lawn after a demonstration ride.

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## How Free is the Caltech Press?

By Chris Kennelly

EDITOR-IN-CHIEF

This week has been the most bewildering I've seen since being involved with *The Tech*, first as a staff writer and now as its Editor-in-Chief.

As the Ricketts story became an article, it was crucial to consider whether to republish the photos in question. Those who urged publication of the photos underscored the context which might be provided. They describe the photos as "benign."

Others told me it was not worth it to print the photos in whole or in part. For them, it wasn't a question of whether or not the photos provide context; nor was it a question of whether or not the photos are so repugnant that our ought to be abridged.

Perhaps this newspaper would succeed in publishing its issue; and as editors, we would never be questioned for our decisions. *The Tech*, however, does not exist within a vacuum. These students have pondered the reaction against the entire student body on the part of administrators who read our newspaper.

This perceived chilling effect to free speech is alarming at an Institute where "Impeach Nixon" once hung from Millikan library.

## An Apology

By Aryan Safaie

UNDERGRADUATE

I would like to sincerely apologize for my offensive email. My intentions were never to hurt you or make you feel uncomfortable, but rather, to tease our RA for his initial message to the house. I was so absorbed in a chaotic house culture that I neglected to think for one second that there may be some hurt feelings produced by my emails. For this I'm truly sorry. Please believe me when I say that neither David nor I was aware of any hardships you were going through, and we didn't intend on making light of them or ridiculing them. Again, I apologize on behalf of our stupidity.

With regards to the punishments we've been given, I hope you feel that what is being demanded of David is highly unnecessary and counterproductive, for many reasons which I won't even bother to enumerate. I implore you to address the injustice of his punishment, and to realize that he meant you absolutely no harm. My only request is that you find it in your heart to speak to the powers that be, so as to make them reconsider their decision. David's last memory of this school shouldn't be one of persecution and sorrow.

## Caltech, Take Sexism Seriously

By Hillary Walker

UNDERGRADUATE

I write to express my deep disappointment in the Caltech community. Although recent events motivate this response, I must emphasize that the opinions herein are informed by my general experience at Caltech over the last two years and not by particular incidents.

Some students have argued that our generation is so strongly fortified against true sexism that we would instinctively reject it. Yet how can this be when misogyny pervades our campus—as many women would attest—and students say nothing? Have we become so accustomed to these offenses that they no longer seem extraordinary at all? Discussions about sexism and science still rage. A study by the Center for Work-Life Policy published in the *Harvard Business Review* in June 2008 concludes that discrimination and demeaning behavior thrive in the fields of science, engineering, and technology. Women report suffering harassment, dismissive attitudes from male colleagues, isolation, and a lack of mentors.

As a result, roughly half flee from these fields. It is preposterous to suggest that sexism is no longer a problem.

I truly believe that Caltech has the resources to train the best scientists in the world, but what is the worth of stunning intellectual promise without good character and empathy? If we ever hope to extinguish the prevalent sexism in science, we must begin with ourselves, the freshest generation of scientists. We must reform the culture of science—a culture reinforced every year in our classrooms, our laboratories, our Houses.

At any other university, the remarks I hear daily would be completely unacceptable, even as jokes. Aside from punitive threats from the administration, the Caltech community seems nearly devoid of standards of decency and respect. Should our lauded honor code not guide our social interactions as well? Should a hostile living environment not be considered a violation?

Certain individuals claim that they are liberated in their thinking, unbounded by typical conventions and norms, free to challenge the status quo. True free thinkers, however, would not create or tolerate an ethos of

fear in which dissenting opinions are ridiculed if even voiced at all. That a serious email regarding misogyny from a Resident Associate inspired jokes instead of an open discussion signals that our community is severely crippled. Furthermore, offensive comments are regularly disguised as satirical jokes. My desire is not to question the integrity of any specific individual. I am sure the authors of degrading remarks do not fully realize the power and oppression of their words. Still, satire and real attitudes threaten to become indistinguishable. How can a comment be satirical if it matches the consistently-voiced belief of its source? Perhaps these individuals only pretend to be sexist. If this is the case, I must agree with Kurt Vonnegut and give this warning: we must be very careful what we pretend to be, for that is what we are.

I am appalled by the lack of empathy I've encountered and witnessed since my matriculation to Caltech. I implore you to consider the kind of community we are creating. If we hope to effect change, we must open a conversation and relinquish our hostility. Please, for the future of Caltech, be thoughtful.

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## An Open Letter to the Deans

By Fedor Manin

UNDERGRADUATE

Dear Dean Green and Dean Hall,

At the beginning of this school year, I heard that Rotation skits were no longer going to happen because people were offended at one of this year's skits. Never mind how accurate this really is. My first reaction was one of disbelief, and as I pried into the causes of this disbelief, I realized that the core of the matter was that I didn't know what it meant to be offended.

Later, I remembered: a prefrish had claimed I had a noticeable Russian accent. This implied that I, a more-or-less-native English speaker whose Russian is slowly slipping into passive memory, was a worthless human being who couldn't even speak a language properly. I was hurt -- offended,

to be precise. In other words, someone who is offended by, say, a misogynistic statement would have to feel like their own self-worth is being violated. In a world where this word, "offended," is bandied about haphazardly, it is important to anchor ourselves to a definition in order to keep our bearings.

This brings me to the reason for this letter. As I understand it, two students are being PNG'ed from Ricketts House for sending emails to the house email list that were deemed by someone to be offensive to women. I believe this to be unreasonable in several unrelated ways, which range from deep and moral to superficial and legalistic.

First, regardless of how the emails reached you, I find it difficult to believe that someone

on the Ricketts house list would genuinely feel that these emails violated her self-worth as a woman. If you do not, this is probably the result of a generational gap. Kids in my generation grew up in a society where real racism and sexism are unequivocally unacceptable. When we hear someone seriously say something that is truly racist or sexist, we cringe and back away. But such events are rare enough that we can allow ourselves to adjust our filters so as to let through ironic statements that mock both racists or sexists and the people who express instant outrage at such statements. I am sure that any Caltech student you

"I find it difficult to believe that someone on the Ricketts house list would genuinely feel that these emails violated her self-worth as a woman."

ask will tell you that the emails in question were intended as a joke, whether or not they consider them funny, and even if they are offended because they exhibit the sort of touchiness that the emails were intended to mock. From this standpoint, I believe the emails to be a non-issue.

But suppose that someone in Ricketts was truly offended. What's more, she felt that she personally had been sexually harassed! According to Caltech's harassment policy and the United States legal system, this is sexual harassment. But regardless of what anyone else thinks, the perpetrators very clearly intended what they did as a joke which was not directed, as far as I understand, at anyone in particular. Intent factors into our legal system in many ways; given how nebulously

sexual harassment is defined, surely intent should factor into the definition, both from a moral standpoint (how does unintentional harassment even make sense as a concept?) and to prevent people from succeeding in frivolous or vindictive accusations. Realizing that real sexual harassment is difficult to prosecute, I don't see how considering this sort of clear-cut case to be sexual harassment helps anyone at all.

This sort of reform is perhaps a battle for another day: no one is losing his job or having his life destroyed over this. Two people are just being thrown out of their home of several years and the home of their friends. But even if

we accept that this was sexual harassment, the punishment is disproportionate and absurd. I would be fine with someone being PNG'ed if he made someone else feel unsafe, but even if this is harassment, surely it is not of that magnitude. Moreover, surely throwing these people out of Ricketts will not prevent them from writing emails to the house list! Suppose, further, that dozens of students sent similarly "offensive" messages to administrators in a concerted protest campaign. (This is not a threat.) Would they all be PNG'ed? Or are people in this case being singled out for harsh punishment as an example to others? I sincerely hope that this is not the case.

Regardless, I would like you to consider what I have written. I have no personal investment in this matter; I hardly know the people involved. But to me, this seems a matter of justice, with some good old American free speech mixed in.

## Unhappy? Complain to the right people

By Nick Rosa

RICKETTS HOUSE PRESIDENT

I feel these disciplinary measures are excessive, not fitting with the students' actions, and do not effectively address a "hostile or intimidating environment" which the Harassment Policy is intended to prevent. I do not wish to question the conclusions reached by the investigating committee regarding the validity of the harassment complaints, my intent is merely to express my support for an appeal of the punishment chosen by the committee. Several students from multiple Hovses have taken it upon themselves to convey directly to the administration their concerns regarding this incident. Furthermore, many students have indicated that they believe the content in question was not of a harassing nature. While Aryan, David, and I greatly appreciate the sentiment behind these gestures, we urge concerned students to contact their student leaders or RAs so as to constructively focus their support in the proper channels.

This being said, I certainly do not want to discourage student involvement in this matter. Students should understand that we are able to express our concerns through the provisions provided by the institute policies. We have the responsibility and obligation to review these policies to ensure that they are effective and that we are being adequately protected by them.



**ASCIT Board of Directors Meeting – Minutes**  
April 17, 2009

This is an abridged version of the minutes. Please look to the donut website or the ASCIT bulletin board for complete minutes.

**Officers Present:** Anthony Chong, Andrey Poletayev, Pallavi Gunalan, Michael Maseda, Maral Mazrooei, Nadia Iqbal, Laura Conwill

**Officers Absent:** None

**Guests:** Sarah Marzen

**President's Report:**

**Harvey Mudd Party:** Eric Madsen is meeting with Chris Hallacy regarding the MHF proposal for the Harvey Mudd Party. The party will be from 9 PM to 1 AM. Buses will be planned accordingly.

**Officer Reports:**

**V.P. of Academic Affairs (ARC Chair):** The ARC has reorganized the structure of their meetings, and they are going to meet in smaller groups to deal with individual issues. They also decided to have discussions between ARC reps and their houses when any issues arise. Pass/fail discussions have been held in every house; the main opinion is that putting courses on grades may not solve the problem of freshmen taking upper-level classes during their first two terms.

**V.P. of Nonacademic Affairs (IHC Chair):** Alcohol was banned in Page on Friday; residents are being sure to follow the dean's requests. The IHC recently appointed the stewardship chair, interhouse ath man, and food chair. They will be doing the rest of the appointments soon. The IHC is communicating with the administration regarding finding a new MOSH.

**Operations Director:** The club funding meeting is tomorrow at 9 in the MCR in SFL. Mike will deal with the yearbook and shuttles after club funding is over. Mike is meeting about the student center with Pallavi, Tim Black, and Will Steinhardt tonight.

**Social Director:** Nadia tried reserving Dabney Gardens for ASCIT Formal and it was completely booked for May and June. Pallavi suggests Nadia talk to Dean Hall about an alternate location, possibly in Avery.

**Other:**

Anthony has received complaints about the number of ug-list emails that have been sent out over the past couple of months. Everyone will work to consolidate their mailings and spam the undergraduate population less often.

Submitted by Laura Conwill

Caltech Personal Account  
Statements will be available on line  
only beginning in July.  
If others should view and/or pay  
your bill, please go online to access.  
caltech, then select CASHNet and  
set up a user name and password for  
them.

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**Student Awards from the Dean's Office**  
2008-2009

The Dean and Associate Dean of Students will host lunch at the Athenaeum on April 22nd to honor and recognize this year's winners of the leadership awards.

Peter Liu and Kevin Noertker are the joint winners of the 2009 Frederic W. Hinrichs Memorial Award for a senior or seniors who have made the greatest contributions to the student body and whose qualities of character, leadership and responsibility have been outstanding.

Po-Ling Loh has won the 2009 Mabel Beckman Prize, which recognizes academic excellence and outstanding leadership skills, commitment to personal excellence, good character, and a strong interest in the Caltech community.

Angela Zah is this year's winner of the Bibi Jentoft-Nilsen Memorial Award, which recognizes an upperclass student who demonstrates outstanding qualities of leadership and who actively contributes to the quality of student life at Caltech.

Susan Shen has been selected as the recipient of the Doris Everhart Service Award, which is annually awarded to a student who has actively supported organizations that enrich not only student life, but also the campus and/or community, and who has exhibited personal concern for student welfare.

Deans' Cup and Campus Life and Master's Award are presented to undergraduates whose concern for their fellow students is demonstrated by persistent efforts to improve the quality of undergraduate life and by effective communication with the faculty and administration. Alex Hudson, Zack Higbee and Chris Watson will receive the 2009 Deans' Cup. The Campus Life and Master's Award will go to Ekta Bhojwani, Andrea Dubin, Cliff Chang and Dvin Adalian.

Tara Gomez and Sunny Chun are the recipients of the Lucy Guernsey Service Award, which is given annually to students who have provided exceptional service to the Y and/or the community and who exemplify a spirit of service.

Leon Liu was awarded the Frank Teruggi Memorial Award, which honors the spirit of Frank's life, especially for a student who has performed activities aimed at improving the living conditions of the less fortunate.

Natalya Kostandova was selected recipient of the Mari Peterson Ligocki '81 Memorial Award, for the student who provides quiet support and kind encouragement to peers, and in doing so has improved the quality of student life at Caltech.

The Hallett Smith Committee of the Caltech English Faculty is pleased to announce the winner in the 2009 contest for the finest essay devoted to Shakespeare. The prize is awarded to Hillary Walker.

*The California Tech is publishing this notice as a public service to the Dean's Office.*

## Senior Class Co-President Candidate Statements

Bettina Chen &amp; Ankita Mishra



A lot of us can't wait to get out of here, but at the same time we want our senior year to be fun. Commencement is something we've been counting down to since frosh year. The commencement speaker can either make the event more memorable or turn it into a painful hour or two of listening to some old guy speak in monotone. We want an exciting graduation just as much as the rest of you so we will try our hardest to find a speaker that will both entertain and motivate us. Along with commencement, Ditch Day is a huge part of being a senior. We want our Ditch Day to be an unforgettable one for both the underclassmen and ourselves, promising that it will run smoothly.

Once we leave this school, we want to leave something that will benefit the future classes. We will be sure to listen to all your ideas to pick a really great senior gift. Finally, we want our senior trip to leave us with lasting memories and some good stories to tell. Between the two of us, we've had a lot of experience organizing social events on and off campus and interacting with faculty and the administration. We are both involved in various extra-curriculars that give us a chance to hang out with people from all the houses. We want to have a really fun senior year and would like to make that happen for you too.

Bettina Chen  
Ankita Mishra

Joules Gould &amp; Daniel Obenshain



Both of us are very excited about the opportunity to represent our class as Senior Class Presidents. Joules has been the Avery Chancellor in the past and has lots of experience leading others. Before that, she was the Avery House social director. Dano has been the Dabney Vice President for two years, so both of us have lots of experience organizing events. Since he gets to be a senior for two years in a row, Dano's also on the senior committee this year, so he has experience with what is required of the Senior Class Presidents behind the scenes. If elected, we promise to pick an awesome speaker for graduation, organize ditch day effectively, and put together a memorable senior gift. We promise not to pick the graduation speaker based on what we want, but rather on what the class as a whole wants.

Joules Gould  
Daniel Obenshain

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*Hannah Montana: Cheesy, but not worthless*

by Vibha Laljani

Did you just glance over the title? And now you're probably thinking "Hannah Montana – this is silly! This is for tweens. A college newspaper is no place for this review!" When I walked into the AMC Century 14 theatres with my friend Caryn, free passes, a large popcorn and a soda, I realized that we were two of the very few adults who were not parents chaperoning their kids. At this point, I was re-thinking my decision to watch the movie for this review. Of course I stayed because anything seemed more appealing than that problem set that I was avoiding.

However, as the movie played, I was quite surprised to see how much a teen singing star can have in common with a Techer! I mean how many times have you gotten so caught up in work that you missed out on chilling at a lovely beach?

Hannah-Montana: The Movie, a musical dramatic comedy, is about Miley Stewart (Miley Cyrus), who is

trying to retain her life as an ordinary teenager- she has to deal with her annoying older brother, take turns doing dishes, deal with jammed lockers and so on. In a parallel universe, she is enjoying the fame and popularity bestowed upon the teen singing sensation Hannah Montana, and (when she's not onstage) fighting with Tyra Banks over that cute pair of shoes. When Hannah gets so caught up in her work that she forgets to be Miley, her father Robby Ray Stewart (real-life father, Billy Ray Cyrus) forces her to spend two weeks at her home town Crowley Corners, Tennessee so that she can connect with herself and her roots.

I have to admit that the movie is quite predictable given it has a pinch of "Sweet Home Alabama", sprinkled with a couple concerts to save the cherished town square from the developers and their shopping mall, garnished with a cute childhood friend love interest. However, we can

eat pizza several times and it still tastes great, right?! The movie still has a good dose of laughter as Miley pranks the British paparazzo (Peter Gunn), who is trying to blow her cover. Hannah's disappointment in herself as she ruins her father's chances of getting together with Lorelai (not that one from Gilmore Girls!), and Miley's relationship with the cute farm boy did bring tears to my eyes. And I couldn't help but do the pop-and-lock to the track "Hoedown Throwdown", which was stuck in my head even as I left the theatre.

At the end of 102 minutes, I realized that no matter how many excuses one makes, it is actually quite possible to "... get the best of both worlds", or in our case all three: study, sleep, social life.

*Warning: Depending on your sense of humor, you might have to try laughing at the movie rather than with it at some points.*



# 20 Questions with Professor Frautschi

...as interviewed by Helen Kondos



Professor Steven C. Frautschi graduated from Harvard College in 1954 and received his Ph.D from Stanford University in 1958. He has been teaching physics at Caltech since 1962. Now a Professor Emeritus, he was also the Master of Student Houses from 1997 to 2002.

## 1. Why Caltech?

After attending college on the East coast, I decided to try the West coast for graduate school. There were three possible schools in Physics: Caltech, Stanford, or Berkeley. At that time Caltech was a men's school, and I'd already spent 4 years at one of those, so I didn't even apply to Caltech. I went to Stanford.

Eight years later, when Caltech offered me an Assistant Professorship, I had a different perspective: Murray Gell-Mann and Richard Feynman were the most awesome pair of theorists in the world, and the other profs and students at Caltech were second to none. I accepted without hesitation, and I've never regretted that.

## 2. You are a Professor of Theoretical Physics. What does a theoretical physicist do?

Of course a theoretical physicist calculates.

Another activity, when the situation is too complicated to make a full calculation, is to make models. It takes a lot of insight to include suitable ingredients to capture the essence of the situation, without getting lost in detail.

The most celebrated activity is to create a completely new theory to explain data [Newton, Schrodinger, Heisenberg] or to overcome an apparent paradox or inconsistency by reinterpreting or extending existing concepts in a new way [Einstein, Maxwell]. A theorist is very fortunate if he gets to do even a pale reflection of that once in a lifetime.

## 3. Tell us about your research. What are you working on now?

My most influential work was done way back in the early 1960's. Hideki Yukawa had explained nuclear forces in terms of meson exchange, and that was a great success for exchanges of spin zero particles such as the pi meson. But exchanges of high spin particles produced a theoretical disease (an

impossible increase of cross section at high energies).

Geoffrey Chew of Berkeley and I proposed to cure the disease by exchanging a whole family of particles (for example, the pi meson plus its excited states of higher spin and mass), linked together by a mathematical construct we called Regge poles. The distinctive predictions of this approach for scattering cross sections were soon confirmed when accelerators capable of bringing protons to highly relativistic energies began operation at CERN and Brookhaven.

Having at most two data points on a plot of spin against mass squared, we had drawn a straight line through those points to characterize the Regge pole. As more excited states were discovered, and more high energy cross sections measured, the new data fell nicely onto our straight lines with a universal slope – implying equal spacing between the mass squared of excited states of increasing spin. That equal spacing became early evidence for the original string theory! (To see the possible connection, note that a violin string has equal spacing between the frequencies of successive overtones, frequency is proportional to energy in quantum mechanics, and energy is  $mc^2$  in relativity.....)

I'm Emeritus now and no longer doing research, though I'm still teaching freshman Physics which keeps me in touch with young people.

## 4. Do you mean that your most famous contribution was to draw a straight line between two points?

Indeed, in a comic book oversimplification, you could say that I won tenure by drawing a straight line between two points, and that David Politzer won the Nobel Prize by calculating a sign right. Of course you have to find the right space to draw the straight line in, and explain its significance, and you have to find the right quantity to calculate the sign of, and explain its significance.

## 5. What first made you interested in Physics?

When I was growing up, my father used to take us to church, and then we would walk home. On one of these walks, when I was about twelve, he told me that physicists had been able to express the essence of everything that happens in the natural world in just a few basic equations. I thought that was remarkable, and I still do. [My dad wasn't a scientist, he just managed the family furniture store, but he tried to follow modern ideas.]

Later in high school, I actually enjoyed Biology more than Physics. But this was old-style descriptive Biology with no math. I liked math, and felt I could do better in Physics where math is the language.

## 6. You have traveled and lived all over the world; what are some your favorite places to visit? To live?

I enjoy sightseeing, but I've found

I get a better understanding of foreign countries by going there to work, with sightseeing on the side.

Among my favorites:

- A postdoctoral year at the Yukawa Institute in Kyoto, Japan.

- Three weeks lecturing at a Summer School in Bangalore, India (15 lectures that developed into my first book, on Regge Poles and Scattering Theory).

- A year at CERN lab, Geneva, Switzerland.

- A year with our daughters in Paris (we put them in the local public school, and they loved it).

- Two month-long treks in the Himalayas with Sierra Club groups.

- A semester teaching the honors section of freshman Physics at Postech, a South Korean science school modeled after Caltech.

## 7. How is studying, working, and researching different outside the United States?

In Europe there's been a tradition of a few big tests, leaving the student a flexible schedule in between with time to think, instead of the continual homework assignments and short tests favored in the United States. Their tradition produces people who have learned to think for themselves, but it also produces a higher failure rate.

Also in Europe, they're better at taking holidays and vacation than we are.

## 8. What is your favorite era of music? Favorite composer? Favorite popular singer/band?

I like a broad range of classical music. We've been delighted that our daughters took that a step further and became concert violinists.

## 9. If you had to go back and major in humanities or social science, what would you pick?

Either Economics for the mathematical modeling, or History because it's so interesting.

## 10. Do you speak any other languages besides English?

I'm a failure at foreign languages. Our daughters went right by me in both Japanese and French.

## 11. Of all the places you have not been, where would like to go?

The Galapagos Islands.

## 12. Did you ever read comic books? Do you have a favorite?

Of course I read comic books as a kid – everybody did. As a grownup my favorites are European – Asterix and Tintin.

## 13. Converse high tops....tell us your thoughts.

I've been wearing Converse high tops for decades. For a while they were hopelessly out of fashion. Then one day I was riding the subway in Tokyo, where people are much more clothes-conscious than I, and along came two sporty young fellows in high tops. My shoes were back in style!

After they get too dingy to bring to school, I wear them on short morning hikes in the Altadena foothills until they fall apart.\*\*

## 14. What is your favorite piece of literature? Are you a fiction or non-fiction reader mostly?

No unique favorite. I read a lot of novels when I was younger, but now I prefer non-fiction such as cultural history.

## 15. What do you think is the most viable renewable energy option?

Nate Lewis is right – solar.

## 16. If you could have a superpower, what would you want it to be?

You know, my wife and I are going to Wagner's Ring Cycle at the L.A. Opera. There Wotan, king of the gods, is the superpower. But he faces lots of constraints and other power centers he has to negotiate with – giants, dwarfs, his wife, and so forth. Eventually everything slips out of his control and falls apart.

## 17. What is your favorite dish at the Athenaeum?

I order something different every day. The food is good, but I go mainly for the conversation.

## 18. What is the most important quality in a library?

I like to browse.

## 19. What is your favorite kind of ethnic food? Favorite dish?

Since my wife is Japanese, we eat a lot of Asian food and we use chopsticks more than half the time.

## 20. What are our thoughts on the number 42?

None at all. But I have a question for you and your readers – where did the special numbers in the Bible come from? Seven [on the seventh day he rested, seven fat years and seven lean years, seven deadly plagues...] may have been special because with the naked eye one sees seven objects making regular motions in the sky (sun, moon, and five planets). That's certainly why we have seven days in the week.

But why 40 (forty days and forty nights, forty years in the wilderness...) And why eight in the Far East (Eight Fold Way of Buddhism, Beijing Olympics starting at 8:08 on August 8, 2008, wedding banquet hall of 888 square meters at the new Hong Kong airport...).

\*\* According to the Wikipedia article about Professor Frautschi, "he has worn Converse for the last 40 years."



## Bans from Ricketts provoke strong undergrad response

PNG, FROM PAGE 1

"I don't see how the Deans' response to the issue was at all appropriate," wrote Cohen. "Rather than getting to the heart of the communications problem within Ricketts, they punished specific members for a single misstep which any of us might have made."

"The response [by the undergraduate community] has been moving, touching, and heartwarming," said Safie. "It is proof that Caltech undergraduates do know how to be sensitive."

Two successful appeals could allow Koenitzer and Safaie to remain in Ricketts House, but neither student is planning their future actions on the hope of a successful appeal to Vice President Anneila Sargeant. Safaie plans to move off-campus, at least for junior year.

Koenitzer plans to finish the last term in his Caltech undergraduate career from his home in Huntsville, Alabama. In his eyes, the appeals process will take another month, giving him only a few weeks to stay in Ricketts House before commencement.

"The skurves are more than just my friends- they are my family," said Koenitzer. "And if I cannot spend my last term with them, I'd rather not be here at all."

### How bad were the emails?

"When I sent the emails originally, I showed them to my father first- he looked at them and laughed," said Koenitzer. "My

mother said, '... those pictures were completely benign.'"

According to Safaie, Dean Hall said that he didn't approve of the Ricketts sense of humor.

Koenitzer and Safaie met with two administrators to discuss the emails after Spring Break. Both Koenitzer and Safaie said that they felt that one administrator there unfairly accused them of sexism.

"[The first administrator]'s whole tirade on us was created from a really superficial, partial, and incomplete understanding of what was really going on," said Safaie.

Koenitzer said that the administrators interviewing him wrote down what he said out of context. "It was pretty clear that the decision had been made before I even came into the room," said Koenitzer.

Although Koenitzer still has nearly a week before he has to move out, he "feels insecure being in Ricketts House right now", knowing that someone would rather tell the Deans about what Koenitzer says than confront him.

"I feel like this 'hostile environment' in Ricketts House has not been improved by this decision," said Koenitzer. "My friends and I are uncomfortable being ourselves under the threat of such drastic measures."

*The images from Koenitzer can be found at <http://tinyurl.com/ironmouse> and <http://tinyurl.com/boobscarf>.*

## Changes to Core in the works

CORE, FROM PAGE 1

Professors of some of the classes concerned agree to some extent with both sides. Professor Glen George, the instructor for EE51, said that "of the about 20 freshman in the class there might be 1 or 2 that seriously abuse the P/F," and he has some concerns that the "plan might backfire." Professor Chris Umans, instructor for CS 21, said that although he

has not noticed the abuse, "I have felt somewhat uncomfortable about the potential for abuse." As an alternative, this past term he changed the passing threshold to a C-, an arrangement he said he is happier with.

Bhandari said that the committee will be meeting today when she will present the results of the house meeting. The committee should reach a decision within the next couple weeks so that it could take effect next year.

## Women's Center combined with Center for Cultural Diversity

By **Natalya Konstandova**  
STAFF WRITER

In wake of recent budget cuts, the Women's Center (WC) has not been able to avoid restructuring.

Prior to the change, the WC was a separate entity. Now, the Center no longer exists on its own, and is incorporated into the new Center for Cultural Diversity (CCD).

CCD, formally supported by the members of the LGBTQ community and the office for Minority Student Education (MSE), will continue to carry out most of programs put in place by the Women's Center, with a few exceptions.

However, staffing will change. The Women's Center was directed by Felicia Hunt, while the new CCD will be directed by Eva Graham, with Portia Harris, who was heavily involved in the work done by the Women's Center, and Luz Rivas, currently on staff.

The Graduate Women's Discussion Group and First Year Programming and Weekly

Lunches, meant to encourage an open and confidential discussion to facilitate exploration of academic, professional, and personal aspects of students' lives, will now have less funding, which may be reflected in the decreased number of related sponsored events as well as fewer provided lunches.

Support for Reading Women, a monthly reading group, is currently undergoing change, as is programming related to self-defense classes and other workshops. Support for students in crises as well as Lactation room will remain unchanged.

One of the programs set up by WC, Women Mentoring Women, will remain unchanged throughout the transition. The program, designed for graduate students and postdoctoral scholars, matches up women for one-on-one mentoring and includes resources such as monthly mentoring opportunities, including presentations and seminars, books, coffee stipends, and workshops.

## Lack of liquid hydrogen fuel stations obstacle to H<sub>2</sub>-car practicality

BMW, FROM PAGE 1

clean energy was for Caltech Transportation to use the car most of the time," says Dr. Hoffmann. Even though Dr. Hoffmann is the designated the "official driver" of the vehicle, several other drivers within the transportation department are listed as secondary drivers.

The presence of the car on campus has already generated enthusiasm. "It's just very exciting to see these giant steps towards a greener Earth happening around me," says sophomore Tina Ding, who learned about the car in mid-February at Professor Harry Gray's talk, "Powering the Planet."

### Smooth Ride

The BMW Hydrogen 7 ran smoothly during a brief test drive onto the 210 freeway with Kenneth Lewis, manager of the Caltech's Chauffeur Service and one of the designated secondary drivers. As a passenger, I didn't even notice when Lewis switched the engine's fuel source from hydrogen to gasoline (or vice versa) via pushing the "H<sub>2</sub>" button on the right edge of the steering wheel. An engine fuel

switch feature may be important if hydrogen-fueled cars are to one day replace the gas guzzlers that currently fill traffic.

"As a driving experience, this car measures up to any luxury vehicle. You can't tell the difference," said Lewis.

Still, many obstacles stand in the way of practical wide-spread use of hydrogen-fueled cars. According to John Onderdonk, Manager for Sustainability Programs, the first and foremost problem is the lack of an infrastructure for refueling. Roughly 3900 gas stations dot the landscape of Southern California, but there are only twenty-three active hydrogen fuel stations in all of California. And of those twenty-three, most do not provide the liquid hydrogen needed by the BMW Hydrogen 7.

At the moment, the nearest fueling station to Caltech to fill up a liquid hydrogen tank is in Oxnard, where BMW research facilities are located. A second fueling station is being built in Van Nuys, which will further pursue the sustainable energy vision by channeling solar power into creating hydrogen fuel. With an upcoming grand total of two fuel stations in the Los Angeles area to fill up liquid hydrogen tanks, it's difficult to see how cars

like the BMW Hydrogen 7 can be marketed as practical alternatives to traditional gas guzzlers in the next future.

To overcome the lack of compatible hydrogen fuel stations, the BMW Hydrogen 7 actually runs on a modified V12 engine that can use the combustion of hydrogen as well as gasoline. If the vehicle's hydrogen tank empties, the car can switch to run on gasoline until a hydrogen refueling station is accessible. The engineering of this feature scales back an originally 438 horsepower engine to 260 horsepower, roughly equivalent to a Mustang GT. Before hydrogen fueling stations become more ubiquitous, such a tradeoff may be the best choice for environmental friendliness.

On Earth Day, Friday, April 24th, the BMW Hydrogen 7 will be displayed from 11:00 am to 2:00 pm along the San Pasqual Walk in front of Chandler Cafeteria, joined by two electric cars from AC Propulsion: the eBox based on the Toyota Scion and the MINI-E based on the Mini-Cooper. Several other vendors will also be present, including E-Cycle Environmental (recycling, e-waste), VWR (lab supplies), Phoenix (energy dashboard monitoring), Pasadena Water & Power, and Metro.



Above: The inside of the BMW Hydrogen 7.

## Steve Chu to speak at Caltech's commencement

By **Tina Ding**  
STAFF WRITER

Steve Chu, Obama's Secretary of Energy and Nobel Laureate in Physics, will be Caltech's commencement speaker at the ceremony on June 12 for the graduating class of 2009.

"When he was nominated by President Obama, we felt he would be perfect match for commencement speaker," said Robert O'Rourke, Vice President of Public Relations.

Unlike many universities such as Harvard and MIT, Caltech does not pay honorarium, a monetary payment, to its commencement speakers. Universities sometimes award their speaker an honorary degree, such as the degree Bill Gates received from Harvard at the commencement in 2007, 32 years after he dropped out of the

school to start Microsoft.

With Caltech granting neither honorarium nor honorary degree, "it has been difficult obtaining famous renowned individuals in the past," said current senior class co-President Calyani Ganesan.

According to O'Rourke, President Chameau made the contact to Secretary Chu.

Chu has a history of advocating for environmental issues and developing frontiers in physics. Before he was inaugurated into the Cabinet in January, Chu served as the director of the Berkeley Lawrence National Laboratory, where he focused the lab towards developing renewable in biofuels and solar energy. Prior to his interests in energy, he shared the Physics Nobel Prize in 1997 for his work in developing methods of using laser light to cool gases to microKelvin temperatures and

capture atoms in "atom traps."

According to Chu's Nobel Prize autobiography, he was a mediocre high school student and "the academic black sheep in [his] family of accomplished scholars." Caltech's Richard Feynman's textbook Feynman Lecture in Physics inspired Chu to pursue theoretical physics.

"The lectures were mesmerizing and inspirational," Chu wrote, "Feynman made the physics seem so beautiful."

Besides the mentioned accomplishments, he served as professor of physics and molecular and cell biology at University of California, Berkeley, and professor of physics at Stanford. He did his graduate studies at UC Berkeley and his post-doctoral studies at the Bell Labs, where his Nobel Prize winning physics was done.



## Tennis team wins a match in SCIACs, ranking them seven out of eight

By Sarah Marzen  
With reporting by Wesley Yu

STAFF WRITER

In their final SCIAC match, the Caltech men's tennis team scored a close win against La Verne, 5-4, clinching seventh place in the SCIAC Tournament.

"I'm really happy for the seniors to end their athletic career at Caltech on a win," said tennis team Coach Mandy Gamble.

The win was especially sweet, said teammate Wesley Yu, because La Verne beat Caltech 5-4 during the regular tennis season.

The game was clinched when senior Rico Chiu, three-time MVP for Caltech, won his last match 4-6, 5-2, 6-2.

"This was one of my most memorable matches in my four years," said Chiu.

Senior Iliya Shadrin, tennis team co-captain, said, "In the deciding 3-set epic match, what impressed me most about Rico was his calmness after every point, even when he hit amazing passing shots like I'd never seen before. And that's why he's been our MVP for the last few years."

Chiu's match started out with Chiu losing the game, 4-6. "I was tentative and holding back on hitting my shots because I was afraid of hitting them out,"

said Chiu. "My opponent took full advantage of my meekness to take the first set with not too much resistance.... At this point, I resolved to not let him control the point."

The match started with the Caltech tennis team losing two out of three doubles matches, 8-2, 5-8, 1-8. The lone doubles win came from freshman Sam Barnett

and Rico Chiu.

The loss in doubles meant that Caltech would have to win four out of six singles matches in order to win the overall match. Tennis team members Rico Chiu, Sam Barnett, Anuj Arora, and Wesley Yu all won their singles matches, clinching an overall win for Caltech's tennis team.



Senior Rico Chiu is drenched with a bucket of water by his teammates Sam Barnett (right) and Wesley Yu (left, hidden by the shower of water).

## Caltech Dance Show 2009



Photo by Tina Ding

From left to right: Artemis Ailianou, Lauren Kendrick, Gongjie Li, and Zuleikha Kurji perform the Waltz of the Hours in the Caltech Dance Show 2009. Five different Caltech dance clubs- Caltech Dance Troupe, Caltech Ballet Club, Caltech Ballroom Dance Club, Caltech Salsa Club, and Tango Club- performed a total of fourteen dance numbers that ranged from a modern Argentine Tango to hip-hop.

## Upcoming Games

April 24

Tennis at Oxnard, Ojai Tournament  
9:00 AM

Women's Water Polo vs. Cal Lutheran  
SCIAC Tournament at CMS

April 25

Tennis at Oxnard, Ojai Tournament  
9:00 AM

Women's Water Polo vs. Cal Lutheran  
SCIAC Tournament at CMS

April 26

Baseball at La Sierra  
12:00 PM and 3:00 PM

Tennis at Oxnard, Ojai Tournament  
9:00 AM

Women's Water Polo vs. Cal Lutheran  
SCIAC Tournament at CMS



## The Weekly Scoreboard

April 17

Baseball at Cal Lutheran - L (23-2)

Men's Tennis SCIAC Championship at U. Redlands:  
at CMS - L (5-0)  
vs. Whittier - L (5-0)

Women's Tennis SCIAC Championship at Pomona-Pitzer:  
vs. Pomona-Pitzer - L (6-0)  
vs. CMS - L (9-0)

April 18

Baseball vs. Cal Lutheran - L (12-3, 14-1)

Men's Tennis SCIAC Championship at U. Redlands:  
at La Verne - W (5-4)

Women's Water Polo vs. Whittier - L (5-1)

## Dr. Smart, Ph. D. - solving problems since 1973

...PREVIOUSLY on DR. SMART, PhD

Dear Dr. Smart,  
The deans are cracking down on us for playing beer pong. This sucks! What can we do?  
Yours truly, a concerned Pageboy

Stop being stupid. There isn't much you need to keep in mind to do this. As I always say, everyone needs a vice. If your vice ruins another person's good time, then your ass deserves to be lynched. So pick a better vice. If some people are being stupid, keep them from being stupid. It's not hard. This is Caltech, not Faber. While Flemms may

resemble Omegas, Pageboys are not Delta Taus. Under no circumstances can anybody at Caltech be as incredibly badass as John Belushi. Maybe you need to find a scapegoat. Pick the most obvious frat boy in the house and blame him for anything stupid that happens. Of course this is an asshole thing to do. Instead, how about this: when you get in trouble for doing something stupid, don't do more stupid things. Give it a chance to blow over or you're asking for it.

...AND NOW, BACK TO DR. SMART, PhD

"Does your life suck? Drop me a line at Dr.SmartPhD@gmail.com."

gmail.com."

"Also, I would like to wish everyone a very happy April 20th. Remember: everyone needs a vice, as long as it doesn't ruin someone else's good time."

Dear Dr. Smart,  
The deans have taken away our rights to alcohol. What do we do now?

Yours truly, a very concerned Pageboy

Told you so. I'll be taking bets on how soon the next screwup will be.

Dear Dr. Smart,  
I'm getting mixed messages

from the upperclassmen - some say I should cut back on my substance abuse, but others say there's no such thing as too much substance abuse! Who should I believe?

Sincerely, A confused frosh

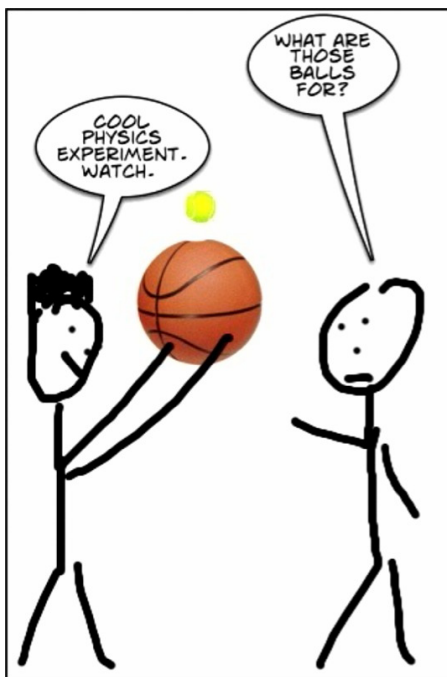
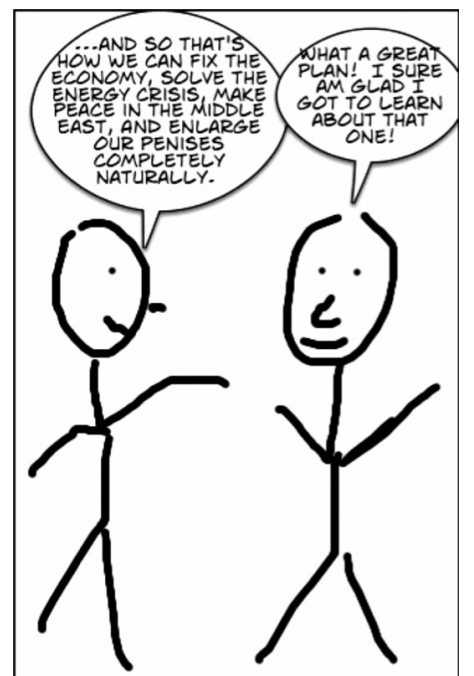
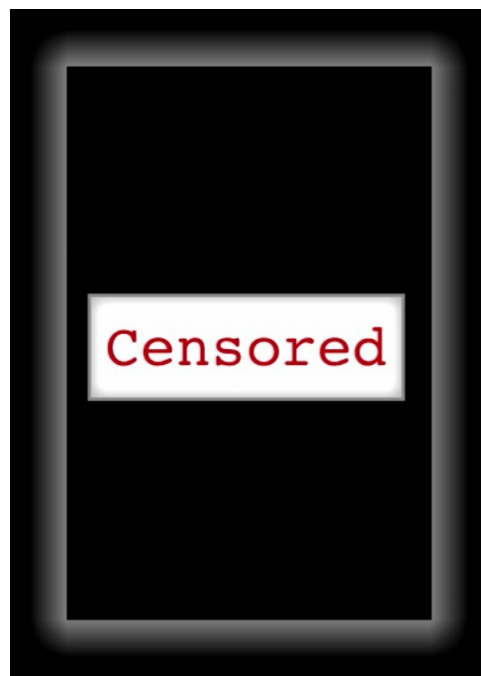
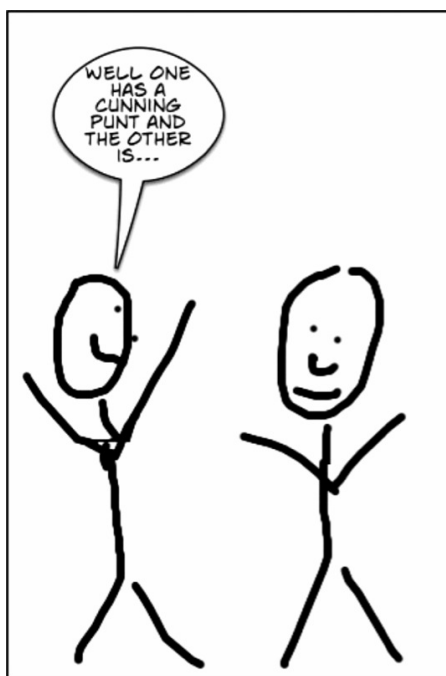
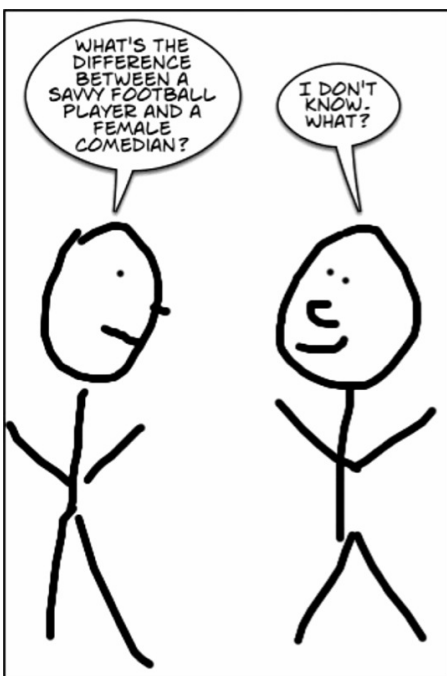
Everyone needs a vice. Some vices are better than others. Try to find the right vice for you. It's important to distinguish substance abuse from substance use. If your vice is adversely affecting your life, you're abusing, so switch vices. You're the best one at calling this, but it's important to understand that your relationships with others can be impacted from substance use. Pick and choose

your friends like grapes, eating the delicious ones and throwing out the crappy ones, leaving the mediocre ones to enjoy your company. The grape is the fruit of hope; learn from it and use what you learn to develop your life skills. Whether you become a hedonist or a miser, as long as you're fine with it, nothing else matters. Because at the end of the day, everyone sucks. You just have to suck less than them. The only one you can't dream to suck less than is me. Nobody sucks less than I do.

P.S.

Happy 4/20!!!

## Comics



The California Tech meets every Monday and Friday at Broad Cafe from noon to 1 PM.

Interested?  
Email [tech@caltech.edu](mailto:tech@caltech.edu)

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Pasadena, CA 91125